Christian Cipriani

List of Publications by Year
in descending order

121	7,442	66234	58464
papers	citations	42 h-index	82 g-index

124	124	124	4702
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Restoring Natural Sensory Feedback in Real-Time Bidirectional Hand Prostheses. Science Translational Medicine, 2014, 6, 222ra19.	5.8	805
2	On the Shared Control of an EMG-Controlled Prosthetic Hand: Analysis of Userâ€“Prosthesis Interaction. IEEE Transactions on Robotics, 2008, 24, 170-184.	7.3	409
3	Sensory feedback in upper limb prosthetics. Expert Review of Medical Devices, 2013, 10, 45-54.	1.4	389
4	Double nerve intraneural interface implant on a human amputee for robotic hand control. Clinical Neurophysiology, 2010, 121, 777-783.	0.7	367
5	Design of a cybernetic hand for perception and action. Biological Cybernetics, 2006, 95, 629-644.	0.6	287
6	Biomimetic Intraneural Sensory Feedback Enhances Sensation Naturalness, Tactile Sensitivity, and Manual Dexterity in a Bidirectional Prosthesis. Neuron, 2018, 100, 37-45.e7.	3.8	265
7	The SmartHand transradial prosthesis. Journal of NeuroEngineering and Rehabilitation, 2011, 8, 29.	2.4	209
8	Online Myoelectric Control of a Dexterous Hand Prosthesis by Transradial Amputees. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 260-270.	2.7	201
9	A closed-loop hand prosthesis with simultaneous intraneural tactile and position feedback. Science Robotics, 2019, 4, .	9.9	198
10	Artificial Redirection of Sensation From Prosthetic Fingers to the Phantom Hand Map on Transradial Amputees: Vibrotactile Versus Mechanotactile Sensory Feedback. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2013, 21, 112-120.	2.7	177
11	Non-Invasive, Temporally Discrete Feedback of Object Contact and Release Improves Grasp Control of Closed-Loop Myoelectric Transradial Prostheses. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 1314-1322.	2.7	170
12	Is it Finger or Wrist Dexterity That is Missing in Current Hand Prostheses?. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 600-609.	2.7	152
13	Sixâ€Month Assessment of a Hand Prosthesis with Intraneural Tactile Feedback. Annals of Neurology, 2019, 85, 137-154.	2.8	140
14	Ultraconformable Temporary Tattoo Electrodes for Electrophysiology. Advanced Science, 2018, 5, 1700771.	5.6	136
15	A Miniature Vibrotactile Sensory Substitution Device for Multifingered Hand Prosthetics. IEEE Transactions on Biomedical Engineering, 2012, 59, 400-408.	2.5	127
16	Roughness Encoding for Discrimination of Surfaces in Artificial Active-Touch. IEEE Transactions on Robotics, 2011, 27, 522-533.	7.3	125
17	Objectives, criteria and methods for the design of the SmartHand transradial prosthesis. Robotica, 2010, 28, 919-927.	1.3	119
18	Principal components analysis based control of a multi-dof underactuated prosthetic hand. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 16.	2.4	105

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19	Referral of sensation to an advanced humanoid robotic hand prosthesis. Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery, 2009, 43, 260-266.	0.6	96
20	Cognitive vision system for control of dexterous prosthetic hands: Experimental evaluation. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 42.	2.4	96
21	Stereovision and augmented reality for closed-loop control of grasping in hand prostheses. Journal of Neural Engineering, 2014, 11, 046001.	1.8	95
22	Vibrotactile Stimulation Promotes Embodiment of an Alien Hand in Amputees With Phantom Sensations. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 450-457.	2.7	94
23	The SSSA-MyHand: A Dexterous Lightweight Myoelectric Hand Prosthesis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 459-468.	2.7	94
24	Decoding of grasping information from neural signals recorded using peripheral intrafascicular interfaces. Journal of NeuroEngineering and Rehabilitation, 2011, 8, 53.	2.4	89
25	Real-time myoelectric control of a multi-fingered hand prosthesis using principal components analysis. Journal of NeuroEngineering and Rehabilitation, 2012, 9, 40.	2.4	88
26	Design of Artificial Hands: A Review. Springer Tracts in Advanced Robotics, 2014, , 219-246.	0.3	86
27	Abstract and Proportional Myoelectric Control for Multi-Fingered Hand Prostheses. Annals of Biomedical Engineering, 2013, 41, 2687-2698.	1.3	85
28	Comparison of linear frequency and amplitude modulation for intraneural sensory feedback in bidirectional hand prostheses. Scientific Reports, 2018, 8, 16666.	1.6	85
29	Dexterous Control of a Prosthetic Hand Using Fine-Wire Intramuscular Electrodes in Targeted Extrinsic Muscles. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 828-836.	2.7	79
30	Tattoo Conductive Polymer Nanosheets for Skinâ€Contact Applications. Advanced Healthcare Materials, 2015, 4, 983-990.	3.9	79
31	Miniaturized non-back-drivable mechanism for robotic applications. Mechanism and Machine Theory, 2010, 45, 1395-1406.	2.7	74
32	Providing Time-Discrete Gait Information by Wearable Feedback Apparatus for Lower-Limb Amputees: Usability and Functional Validation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 250-257.	2.7	74
33	Distance and mutual information methods for EMG feature and channel subset selection for classification of hand movements. Biomedical Signal Processing and Control, 2016, 27, 24-31.	3.5	71
34	Humans can integrate feedback of discrete events in their sensorimotor control of a robotic hand. Experimental Brain Research, 2014, 232, 3421-3429.	0.7	70
35	Intraneural sensory feedback restores grip force control and motor coordination while using a prosthetic hand. Journal of Neural Engineering, 2019, 16, 026034.	1.8	66
36	HyVE: Hybrid Vibro-Electrotactile Stimulation for Sensory Feedback and Substitution in Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 290-301.	2.7	60

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37	Highâ€Entropy Sulfides as Electrode Materials for Liâ€Ion Batteries. Advanced Energy Materials, 2022, 12, .	10.2	57
38	Vibrotactile Sensory Substitution Elicits Feeling of Ownership of an Alien Hand. PLoS ONE, 2012, 7, e50756.	1.1	53
39	Control of a Robotic Hand Using a Tongue Control Systemâ€"A Prosthesis Application. IEEE Transactions on Biomedical Engineering, 2016, 63, 1368-1376.	2.5	51
40	Neural feedback strategies to improve grasping coordination in neuromusculoskeletal prostheses. Scientific Reports, 2020, 10, 11793.	1.6	49
41	A Novel Concept for a Prosthetic Hand With a Bidirectional Interface: A Feasibility Study. IEEE Transactions on Biomedical Engineering, 2009, 56, 2739-2743.	2.5	44
42	Classification of Transient Myoelectric Signals for the Control of Multi-Grasp Hand Prostheses. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1756-1764.	2.7	44
43	Grip control and motor coordination with implanted and surface electrodes while grasping with an osseointegrated prosthetic hand. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 49.	2.4	44
44	Treatment of the Partial Hand Amputation: An Engineering Perspective. IEEE Reviews in Biomedical Engineering, 2016, 9, 32-48.	13.1	43
45	The myokinetic control interface: tracking implanted magnets as a means for prosthetic control. Scientific Reports, 2017, 7, 17149.	1.6	42
46	Humans Can Integrate Augmented Reality Feedback in Their Sensorimotor Control of a Robotic Hand. IEEE Transactions on Human-Machine Systems, 2017, 47, 583-589.	2.5	42
47	Learning tactile skills through curious exploration. Frontiers in Neurorobotics, 2012, 6, 6.	1.6	41
48	The rubber foot illusion. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 77.	2.4	41
49	Transfer of tactile input from an artificial hand to the forearm: experiments in amputees and able-bodied volunteers. Disability and Rehabilitation: Assistive Technology, 2013, 8, 249-254.	1.3	39
50	Online Bimanual Manipulation Using Surface Electromyography and Incremental Learning. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 227-234.	2.7	37
51	Discrete Vibro-Tactile Feedback Prevents Object Slippage in Hand Prostheses More Intuitively Than Other Modalities. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1577-1584.	2.7	36
52	HyVEâ€"Hybrid Vibro-Electrotactile Stimulationâ€"Is an Efficient Approach to Multi-Channel Sensory Feedback. IEEE Transactions on Haptics, 2014, 7, 181-190.	1.8	34
53	Improving internal model strength and performance of prosthetic hands using augmented feedback. Journal of NeuroEngineering and Rehabilitation, 2018, 15, 70.	2.4	34
54	Grasp force estimation from the transient EMG using high-density surface recordings. Journal of Neural Engineering, 2020, 17, 016052.	1.8	32

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55	Progress towards the development of the SmartHand transradial prosthesis. , 2009, , .		31
56	Comparative study of state-of-the-art myoelectric controllers for multigrasp prosthetic hands. Journal of Rehabilitation Research and Development, 2014, 51, 1439-1454.	1.6	28
57	Closed-loop controller for a bio-inspired multi-fingered underactuated prosthesis. , 0, , .		27
58	When Less Is More â€“ Discrete Tactile Feedback Dominates Continuous Audio Biofeedback in the Integrated Percept While Controlling a Myoelectric Prosthetic Hand. Frontiers in Neuroscience, 2019, 13, 578.	1.4	27
59	Independent Long Fingers are not Essential for a Grasping Hand. Scientific Reports, 2016, 6, 35545.	1.6	26
60	Bio-inspired mechanical design of a tendon-driven dexterous prosthetic hand. , 2010, 2010, 499-502.		24
61	Humans adjust their grip force when passing an object according to the observed speed of the partnerâ€™s reaching out movement. Experimental Brain Research, 2018, 236, 3363-3377.	0.7	23
62	Exploiting arm posture synergies in activities of daily living to control the wrist rotation in upper limb prostheses: A feasibility study. , 2015, 2015, 2462-5.		22
63	Touch and Hearing Mediate Osseoperception. Scientific Reports, 2017, 7, 45363.	1.6	22
64	Online Grasp Force Estimation From the Transient EMG. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2333-2341.	2.7	21
65	Influence of the weight actions of the hand prosthesis on the performance of pattern recognition based myoelectric control: Preliminary study. , 2011, 2011, 1620-3.		20
66	Controlling hand-assistive devices: utilizing electrooculography as a substitute for vision. IEEE Robotics and Automation Magazine, 2013, 20, 40-52.	2.2	20
67	PARLOMA â€“ A Novel Human-Robot Interaction System for Deaf-Blind Remote Communication. International Journal of Advanced Robotic Systems, 2015, 12, 57.	1.3	20
68	Feasibility of Tracking Multiple Implanted Magnets With a Myokinetic Control Interface: Simulation and Experimental Evidence Based on the Point Dipole Model. IEEE Transactions on Biomedical Engineering, 2020, 67, 1282-1292.	2.5	20
69	Vibrotactile sensory substitution in multi-fingered hand prostheses: Evaluation studies. , 2011, 2011, 5975477.		19
70	Bioinspired Fingertip for Anthropomorphic Robotic Hands. Applied Bionics and Biomechanics, 2014, 11, 25-38.	0.5	19
71	The S-Finger: A Synergetic Externally Powered Digit With Tactile Sensing and Feedback. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1264-1271.	2.7	19
72	Vector Autoregressive Hierarchical Hidden Markov Models for Extracting Finger Movements Using Multichannel Surface EMG Signals. Complexity, 2018, 2018, 1-12.	0.9	19

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73	SEEDS, simultaneous recordings of high-density EMG and finger joint angles during multiple hand movements. Scientific Data, 2019, 6, 186.	2.4	19
74	Preliminary design and development of a two degrees of freedom passive compliant prosthetic wrist with switchable stiffness. , 2013, , .		18
75	Controlling Assistive Machines in Paralysis Using Brain Waves and Other Biosignals. Advances in Human-Computer Interaction, 2013, 2013, 1-9.	1.8	17
76	Distinct neural patterns enable grasp types decoding in monkey dorsal premotor cortex. Journal of Neural Engineering, 2014, 11, 066011.	1.8	16
77	Ultrasound imaging for hand prosthesis control: a comparative study of features and classification methods. , 2015, , .		16
78	A database of multi-channel intramuscular electromyogram signals during isometric hand muscles contractions. Scientific Data, 2020, 7, 10.	2.4	16
79	â€˜Doublecheck: a sensory confirmation is required to own a robotic hand, sending a command to feel in charge of itâ€™. Cognitive Neuroscience, 2020, 11, 216-228.	0.6	16
80	Guest Editorial. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 711-715.	2.7	15
81	Compliant Prosthetic Wrists Entail More Natural Use Than Stiff Wrists During Reaching, Not (Necessarily) During Manipulation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1407-1413.	2.7	15
82	Decoding of individuated finger movements using surface EMG and input optimization applying a genetic algorithm. , 2011, 2011, 1608-11.		14
83	The Effects of Weight and Inertia of the Prosthesis on the Sensitivity of Electromyographic Pattern Recognition in Relax State. Journal of Prosthetics and Orthotics, 2012, 24, 86-92.	0.2	14
84	A database of high-density surface electromyogram signals comprising 65 isometric hand gestures. Scientific Data, 2021, 8, 63.	2.4	14
85	Bio-inspired controller for a dexterous prosthetic hand based on principal components analysis. , 2009, 2009, 5022-5.		13
86	Development of an Embedded Myokinetic Prosthetic Hand Controller. Sensors, 2019, 19, 3137.	2.1	13
87	Stability andin vivosafety of gold, titanium nitride and parylene C coatings on NdFeB magnets implanted in muscles towards a new generation of myokinetic prosthetic limbs. RSC Advances, 2021, 11, 6766-6775.	1.7	13
88	Electro-cutaneous stimulation on the palm elicits referred sensations on intact but not on amputated digits. Journal of Neural Engineering, 2018, 15, 016003.	1.8	13
89	On the control of a robot hand by extracting neural signals from the PNS: Preliminary results from a human implantation. , 2009, 2009, 4586-9.		12
90	The preload force affects the perception threshold of muscle vibration-induced movement illusions. Experimental Brain Research, 2019, 237, 111-120.	0.7	12

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91	Localization accuracy of multiple magnets in a myokinetic control interface. Scientific Reports, 2021, 11, 4850.	1.6	11
92	The Myokinetic Control Interface: How Many Magnets Can be Implanted in an Amputated Forearm? Evidence From a Simulated Environment. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2451-2458.	2.7	10
93	Continuous supplementary tactile feedback can be applied (and then removed) to enhance precision manipulation. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 120.	2.4	10
94	Embedded Hardware Architecture Based on Microcontrollers for the Action and Perception of a Transradial Prosthesis. , 2008, , .		8
95	Real-Time Single Camera Hand Gesture Recognition System for Remote Deaf-Blind Communication. Lecture Notes in Computer Science, 2014, , 35-52.	1.0	8
96	Non-back-drivable rotary mechanism with intrinsic compliance for robotic thumb abduction/adduction. Advanced Robotics, 2015, 29, 561-571.	1.1	8
97	A cosmetic prosthetic digit with bioinspired embedded touch feedback. , 2017, 2017, 1136-1141.		8
98	Instrumented platform for assessment of isometric hand muscles contractions. Measurement Science and Technology, 2019, 30, 065701.	1.4	8
99	Optimal Spatial Sensor Design for Magnetic Tracking in a Myokinetic Control Interface. Computer Methods and Programs in Biomedicine, 2021, 211, 106407.	2.6	8
100	A novel device for multi-modal sensory feedback in hand prosthetics: Design and preliminary prototype. , 2014, , .		7
101	Decoding of individual finger movements from surface EMG signals using vector autoregressive hierarchical hidden Markov models (VARHHMM). , 2017, 2017, 1518-1523.		7
102	Proprioceptive Augmentation With Illusory Kinaesthetic Sensation in Stroke Patients Improves Movement Quality in an Active Upper Limb Reach-and-Point Task. Frontiers in Neurorobotics, 2021, 15, 610673.	1.6	7
103	A Novel Method for Assessing Sense of Body Ownership Using Electroencephalography. IEEE Transactions on Biomedical Engineering, 2011, 58, 12-15.	2.5	6
104	Feasibility of generating 90ÂHz vibrations in remote implanted magnets. Scientific Reports, 2021, 11, 15456.	1.6	5
105	Neurophysiology of slip sensation and grip reaction: insights for hand prosthesis control of slippage. Journal of Neurophysiology, 2021, 126, 477-492.	0.9	5
106	Adapting proportional myoelectric-controlled interfaces for prosthetic hands. , 2013, 2013, 6195-8.		4
107	Digital Extensions with Bi-axial Fingertip Sensors for Supplementary Tactile Feedback Studies. , 2018, , .		3
108	Grasp Force Estimation from HD-EMG Recordings with Channel Selection Using Elastic Nets: Preliminary Study. , 2018, , .		3

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109	The myokinetic stimulation interface: activation of proprioceptive neural responses with remotely actuated magnets implanted in rodent forelimb muscle. Journal of Neural Engineering, 2022, 19, 026048.	1.8	3
110	Online Prediction of Robot to Human Handover Events Using Vibrations. , 2018, , .		2
111	Noninvasive augmented sensory feedback in poststroke hand rehabilitation approaches. , 2021, , 207-244.		2
112	Evaluation of Simple Algorithms for Proportional Control of Prosthetic Hands Using Intramuscular Electromyography. Sensors, 2022, 22, 5054.	2.1	2
113	Testing silicone digit extensions as a way to suppress natural sensation to evaluate supplementary tactile feedback. PLoS ONE, 2021, 16, e0256753.	1.1	1
114	Feasibility Study on Disentangling Muscle Movements in TMR Patients Through a Myokinetic Control Interface for the Control of Artificial Hands. IEEE Robotics and Automation Letters, 2022, 7, 7240-7246.	3.3	1
115	Toward the Development of a Neuro-Controlled Bidirectional Hand Prosthesis. Lecture Notes in Computer Science, 2015, , 105-110.	1.0	0
116	Evoking Referred Sensations of Missing Digits by Electro-Tactile Stimulation: Preliminary Tests. Biosystems and Biorobotics, 2017, , 607-611.	0.2	0
117	A Parallel Actuated Haptic Device for De-localized Tactile Feedback in Prosthetics. Biosystems and Biorobotics, 2022, , 623-627.	0.2	0
118	Effects of Non-in Situ Vibrations on Hand Sensations: A Pilot Study. Biosystems and Biorobotics, 2022, , 611-615.	0.2	0
119	Improvements on the Design of the S-Finger Prosthetic Digit. Biosystems and Biorobotics, 2019, , 122-126.	0.2	0
120	Method for Optimal Digit Alignment for the Fitting of Partial Hand Powered Prostheses: A Preliminary Study. Biosystems and Biorobotics, 2019, , 132-136.	0.2	0
121	Natureâ€™s Masterpiece: How Scientists Struggle to Replace the Human Hand. Frontiers for Young Minds, 0, 7, .	0.8	0